



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/384,419	08/27/1999	GRAHAM BANK	85874/136	7815

7590 10/23/2003  
FOLEY & LARDNER  
3000 K STREET N W SUITE 500  
P O BOX 25696  
WASHINGTON, DC 200078696

EXAMINER

NI, SUHAN

ART UNIT PAPER NUMBER

2643

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/384,419

Applicant(s)

BANK ET AL.

Examiner

Suhan Ni

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5-27 and 33-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-27 and 33-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This communication is responsive to the election filed 07/30/2003.
2. Regarding the response to restriction requirement, applicants' request for reconsideration of the restriction requirement is persuasive and, therefore, the restriction requirement made 07/01/2003 is withdrawn. The examiner sincerely apologies for the delay.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1, 3, 5-8, 10-13, 16, 23-27 and 33-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Azima et al. (US-6,522,760).

Regarding claim 1, Azima et al. disclose a panel-form loudspeaker (10) comprising: a resonant panel-form member (11) and a vibration exciting system (12) on the panel-form member and adapted to apply bending wave energy thereto to cause the panel-form member to produce an acoustic output, wherein the vibration exciting system is adapted to apply torsion to the panel-form member (col. 2, lines 40-45) as claimed.

Regarding claims 3 and 33, Azima et al. further disclose the panel-form loudspeaker, wherein the vibration exciter/exciting system is adapted to the resonant panel for applying torsion and shear thereto, and said vibration exciting system is coupled to the panel to span a plurality of nodal lines in the panel (col. 2, line 40 to col. 4, line 5).

Regarding claims 5-6 and 35-39, Azima et al. further disclose the panel-form loudspeaker, wherein the vibration exciting system comprises a suspension (Fig. 10) on which the panel is mounted as claimed.

Regarding claims 7-8, 10-13, 16 and 24-27, Azima et al. further disclose the panel-form loudspeaker, that the vibration exciter/exciting system comprises a piezoelectric device attached to a face of the panel (col. 9, lines 59-63).

Regarding claim 34, Azima et al. disclose a loudspeaker comprising a panel-form member (2) mounted on a suspension (Fig. 10) and a vibration exciter mounted on the panel-form member, wherein the vibration exciter is adapted to apply bending wave energy to the panel-form member for causing acoustic resonance (Figs. 2-5), the suspension acts as a pivot for supporting the panel-form member in a simple fashion and causing nodal lines corresponding to the resonance of the panel-form member to move towards an edge of the member (col. 2, line 40 to col. 4, line 5) as claimed.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 14-15 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima et al. (US-6,522,760).

Regarding claims 9 and 14-15, 17-22, Azima et al. do not clearly teach all the details of the vibration exciting system and panel claimed. Since providing a suitable vibration exciting

Art Unit: 2643

system for a desirable vibrating panel of a loudspeaker is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide suitable vibration exciting system, such as a mirror-imaged piezoelectric devices, for the panel speaker, for providing a loudspeaker having desirable output power for satisfying certain applications.

***Response to Amendment***

5. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is (703)-308-9322, and the number for fax machine is (703)-305-9508. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-3900.

Suhan Ni  
Patent Examiner  
Art Unit 2643  
USPTO

  
**SUHAN NI**  
**PATENT EXAMINER**

October 1, 2003